Year 2004

Air Quality Division

ANNUAL AIR EMISSIONS INVENTORY QUESTIONNAIRE

For Facilities Permitted to Operate Dry Cleaning Equipment

Instructions

The 2004 Annual Emissions Inventory Questionnaire includes 4 forms that are required to be completed and submitted to the Air Quality Division. Instructions for each form are included below. Upon completion, submit the forms along with the signature by the Responsible Official of the facility within 90 days of receipt of a letter from the Department.

FORM 1: Facility General Information

SECTION I thru III: Complete all fields as requested.

FORM 2: Equipment, & Process Data

Table 1: List equipment, source category, gallons of PERC purchased, ATO # and emission control device if any.

Table 2: List total monthly PERC purchased, if you don't have a copy of the monthly log sheet.

FORM 3: Emissions Data

Based on the fuel used (Gasoline, Diesel, or Natural Gas/Liquid Propane), choose the appropriate table to input the boiler heat input rate (MM Btu/hr) and the total hours operated during the calendar year 2004. ***Once data is inputted the formulas are set to complete the calculations. Therefore, do not move or change any of the fields or* columns**. A sample of the calculations are provided on Form 2 for anyone who downloads the PDF file.

FORM 4: Summary & Certification

A summarization of all the emissions by each pollutant will be listed within this form. All reports submitted to the Department should be certified true and accurate by the Responsible Official of the facility. This person is the owner or operator of the facility. **If there is a change of the Responsible Official of the facility, please notify the Department with an additional letter stating so.**

The completed questionnaire should be submitted to the following address:

Arizona Department of Environmental Quality
Attention: Darlene Celaya, Emission Inventory Team
Air Quality Division, Compliance Section 3415A-3
1110 West Washington Street
Phoenix, AZ 85007

If you have any question or have difficulty completing this form, please contact Darlene Celaya at (602) 771-7662.

FORM 1: FACILITY GENERAL INFORMATION **YEAR 2004**

SECTION I: ***Plant Identification & Mailing Information***

Customer Name: _____

Place Name: _____ Place ID: _____

Mailing Address: _____ City: _____ State: _____ Zip: _____

County: _____

Phone: _____ Fax: _____

Permit Number: _____ General Permit: Yes No

SECTION II: ***EI Contact***

EI Contact Name: _____ Title: _____

Telephone: _____ Fax: _____

SECTION III: ***Confidential Request***

Pursuant to Arizona Revised Statues §49-432 and §49-201, do you claim the Emissions Inventory data submittal confidential. If yes include which portions of the inventory are confidential along with a brief explanation:

Yes □
No □

FORM 2: EQUIPMENT & PROCESS DATA	YEAR 2004

Table 1: Equipment & Process Data

Equipment (check all equipment on-site)	□ Only Dry-toDry □ Only Transfer □ Combination □ Boiler
Source Category (check one)	□ Small Area Source □ Large Area Source
Gallons of Percholoroethylene used in 2004	
ATO#	
Emission Control Device (check one)	□ Refrigerated Condenser □ Carbon Absorber □ None

Table 2: Yearly Perchlorethylene Purchase *- Attached a copy of the monthly PERC purchased, if unavailable complete the following table.*

	Month	Perchloroethylene Purchased (Gallons)	12 Months Rolling Total (Gallons)
Perchlorethylene purchase for the year 2004	January		
	February		
	March		
	April		
	May		
	June		
	July		
	August		
	September		
	October		
	November		
	December		

Sample Emission Calculation: Emissions = $\frac{\text{Maximum Heat Input Rate (MM Btu per hr) x Hours of Operation (hrs) x Emission Factor (pounds per MM Btu per hr)}}{\text{2000 pounds per ton}}$

For a Boiler with a manxiumum heat input rate of 20MM Btu per and using Natural Gas fuel and operated for 1500 hours during the year 2004, the emissions of Nitrogen Oxides (Nox) will be as follows:

Emissions = $\frac{\text{20 MM Btu per hr x 1500 hours x 0.0952 pounds per MM Btu per hr}}{\text{2000 pounds per ton}}$ = 1.428 tons per year

FORM 3: EMISSIONS CALCULATIONS FOR BOILERS **YEAR 2004**

FUEL - NATURAL GAS *Conversion Factor - 1 Therm = 100,000 Btu's. 1 MMBtu = 1,000,000 Btu's.*

	Boiler #1				**Boiler #2**			
Pollutants	(1) Max. Heat Input Rate MM Btu/hour	(2) Operational Hours hours/year	(3) Emission Factor pounds/MM Btu	Emissions = (1)x(2)x(3)/2000 tons/year	(4) Max. Heat Input Rate MM Btu/hour	(5) Operational Hours hours/year	(6) Emission Factor pounds/MM Btu	Emissions = (4)x(5)x(6)/2000 tons/year
Particulate Matter <10 Microns (PM10)			0.00724				0.00724	
Particulate Matter (PM)			0.00724				0.00724	
Carbon Monoxide (CO)			0.08				0.08	
Volatile Organic Compounds (VOC)			0.00524				0.00524	
Sulfur Oxides (SOx)			0.000571				0.000571	
Nitrogen Oxides (NOx)			0.0952				0.0952	

FUEL - BUTANE

	Boiler #1				**Boiler #2**			
Pollutants	Max. Heat Input Rate (1) MM Btu/hour	Operational Hours (2) hours/year	Emission Factor (3) pounds/MM Btu	Emissions = (1)x(2)x(3)/2000 tons/year	Max. Heat Input Rate (1) MM Btu/hour	Operational Hours (2) hours/year	Emission Factor (3) pounds/MM Btu	Emissions = (1)x(2)x(3)/2000 tons/year
Particulate Matter <10 Microns (PM10)			0.00616				0.00616	
Particulate Matter (PM)			0.00616				0.00616	
Carbon Monoxide (CO)			0.037				0.037	
Volatile Organic Compounds (VOC)			0.00411				0.00411	
Nitrogen Oxides (NOx)			0.216				0.216	

FORM 3: EMISSIONS CALCULATIONS FOR BOILERS **YEAR 2004**

FUEL - DIESEL

	Boiler #1				Boiler #2			
Pollutants	Max. Heat Input Rate (1) MM Btu/hour	Operational Hours (2) hours/year	Emission Factor (3) pounds/MM Btu	Emissions = (1)x(2)x(3)/2000 tons/year	Max. Heat Input Rate (1) MM Btu/hour	Operational Hours (2) hours/year	Emission Factor (3) pounds/MM Btu	Emissions = (1)x(2)x(3)/2000 tons/year
Particulate Matter <10 Microns (PM10)			0.00788				0.00788	
Particulate Matter (PM)			0.0146				0.0146	
Carbon Monoxide (CO)			0.0365				0.0365	
Volatile Organic Compounds (VOC)			0.00146				0.00146	
Sulfur Oxides (SOx)			1.07				1.07	
Nitrogen Oxides (NOx)			0.146				0.146	

FUEL - PROPANE

	Boiler #1				Boiler #2			
Pollutants	Max. Heat Input Rate (1) MM Btu/hour	Operational Hours (2) hours/year	Emission Factor (3) pounds/MM Btu	Emissions = (1)x(2)x(3)/2000 tons/year	Max. Heat Input Rate (1) MM Btu/hour	Operational Hours (2) hours/year	Emission Factor (3) pounds/MM Btu	Emissions = (1)x(2)x(3)/2000 tons/year
Particulate Matter <10 Microns (PM10)			0.00663				0.00663	
Particulate Matter (PM)			0.00663				0.00663	
Carbon Monoxide (CO)			0.0354				0.0354	
Volatile Organic Compounds (VOC)			0.00331				0.00331	
Nitrogen Oxides (NOx)			0.21				0.21	

FORM 4: SUMMARY & CERTIFICATION	YEAR 2004

Total all the emissions for each pollutant and enter in the table below.

Pollutant	Tonnage (tons per year)
Particulate Matter (PM)	
Particulate Matter Less Than 10 Microns (PM10)	
Nitrogen Oxides (NOx)	
Sulfur Oxides (SOx)	
Volate Organic Compounds (VOC)	
Carbon Monoxide (CO)	

Certification of Truth & Accuracy

I certify that I have knowledge of the facts set forth in this questionnaire, and that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Arizona Department of Environmental Quality as public record.

Signature of Responsible Official: _____ Date: _____

Print Name: _____

Title: _____